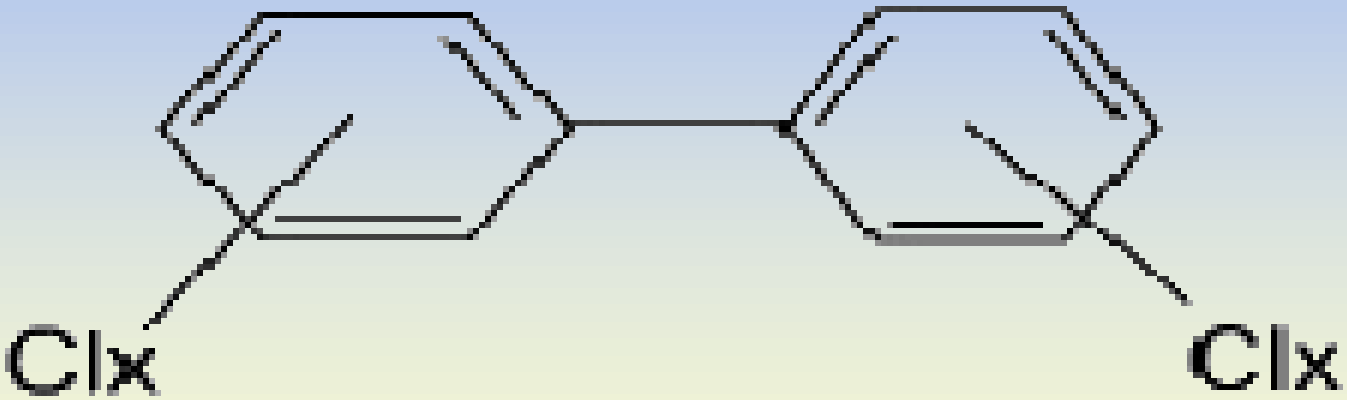
PCB Point Source Monitoring Guidance Document



VADEQ

January 8, 2008

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Overview

- Objective
- Review
  - Response to Comments
  - TAC conference calls
- **Guidance Development**

< Lunch >

- **Data Quality Issues**

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Guidance Document Outline

TMDL Monitoring and/or Data Collection and Analysis to Characterize Point Source Loadings of Low Level PCBs

- ***I Introduction***
- ***II Background***
- ***III Definitions***
- ***IV Procedure for developing guidance***
  - ***A Facilities***
  - ***B Method***
  - ***C Frequency and Duration***
  - ***D Analytical Requirements***
  - ***E Laboratories***
  - ***F Permits***
  - ***G Reporting Requirements***
  - ***H References***
- ***V Appendices***

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

IV Procedures

A. Facilities

VPDES permits discharging into PCB impaired waters will include all major municipals (POTWs) (1.0 mgd design capacity and above including CSOs), minor municipals and industrial and industrial storm water.

Industrial activities with primary or secondary SIC codes contained in Table 1, will be required to monitor. Additional facilities may be required to monitor based on additional information or recommendations of DEQ technical staff.

Certain exceptions or exemptions shall be considered. For example,

- Industrial facilities can be exempt from storm water monitoring if they certify that all their storm water discharge meets the definition of “no exposure” (9 VAC 25-151-70).
- If a facility has more than two outfalls, then they may elect to collect from a representative outfall as defined in the regulations (9 VAC 25-151-70)

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Probable source of PCB
- industrial / commercial -

SIC Code	Code Name Facility
26&27	Paper and Allied Products
30	Rubber and Misc. Plastics
33	Primary Metal Industries
34	Fabricated Metal Products
37	Transportation Equipment
49	Electrical, Gas and Sanitary Services
5093	Scrap recycling
1221 & 1222	Bituminous Coal

Source: Belton et al. 2005

IV Procedures

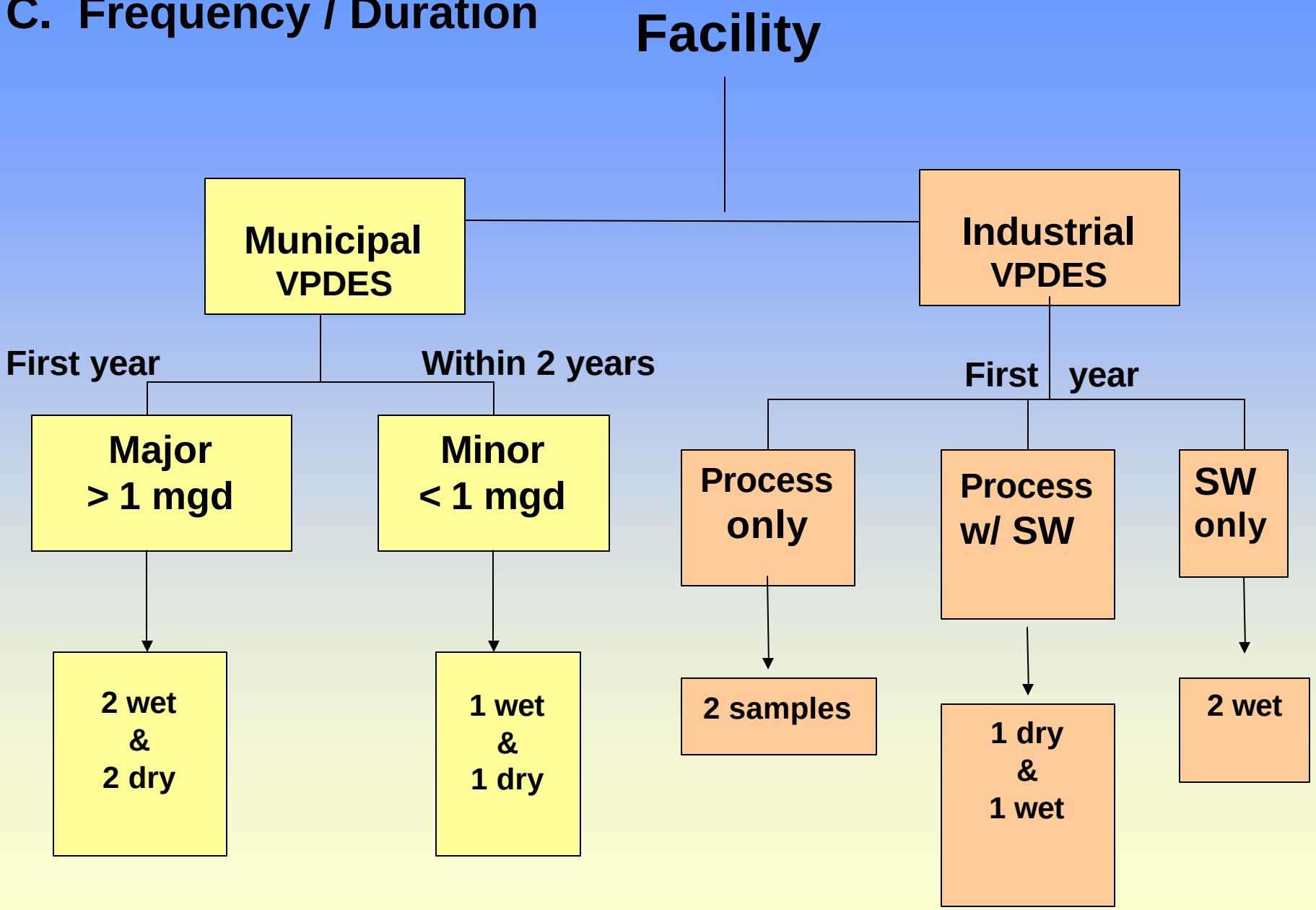
B. Methods

Method 1668A, the highly sensitive analytical method to include the complete spectrum of the 209 PCB congeners (EPA 1999). As per correspondence from EPA's NPDES Program Manager, EPA Method 1668A will be used by Virginia for data generation related to TMDL development (Appendix A).

Specific procedures for sample collection, to include equipment specifications and cleaning procedures, sampling requirements, and sample handling and storage procedures is provided through an effluent sampling method found in Appendix B

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

C. Frequency / Duration



IV Procedures

D. Analytical Requirements

To ensure consistency between sampling events and among participants collecting samples, uniform quality control requirements for the PCB analysis by EPA Method 1668A. This analytical method uses ultra-clean sample collection and handling techniques (Appendix B) along with high resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS). Because this is a performance based method, a set of laboratory requirements is provided in Appendix C.

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

IV Procedures

E. Laboratories

The agency can not recommend any testing laboratory; however, a list of qualified laboratories using performance based EPA Method 1668A will be on file and posted on the DEQ web site.

IV Procedures

F. Permits

- For new or reissuance, permit language is suggested. The sample number will depend on the type of facility (refer to Frequency and Duration).

IV Procedures

G. Reporting Requirements

- Data shall be delivered in an electronic format (EDF or electronic data format) to address aqueous sample collection and analysis associated with point source discharge samples.

Analytical Requirements QA/QC

- Qualified Laboratories – ability to perform method
- Adhere to 1668A QC requirements
  - Method Blanks
  - Spike Recoveries (^{13}C labeled Congeners)
  - IPR/OPR (Initial/On-going Performance & Recovery)
- Rinsate Blanks (none issue composite grabs)